

REMARKS

Claims 1-18 are pending in this application. Applicants have amended the abstract and claims 1, 7-10, and 12-18 in order to expedite prosecution. No new matter has been added. Favorable reconsideration and allowance of the pending claims are respectfully requested

Abstract Objection

Applicant respectfully traverses the objection to the Abstract based on the above amendments and removal of this objection is respectfully requested.

35 U.S.C. § 102(b) Rejections

Claims 1-18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent Publication 2002/0102940 A1 to Bohnke et al. ("Bohnke"). Applicant respectfully traverses the rejection, and requests reconsideration and withdrawal of the § 102(b) rejection.

Independent claim 1 has been amended to recite an apparatus comprising "an adaptive bit loading block to receive channel state information for a plurality of subcarriers and to select a modulation scheme and a puncturing pattern for each of the plurality of subcarriers or for each of a plurality of subbands based on the channel state information, the adaptive bit loading block to select a first puncturing pattern having a first number of output coded bits for a first subcarrier or subband of the plurality of subcarriers or subbands, the adaptive bit loading block to select a second puncturing pattern having a second number of output coded bits for a second subcarrier or subband of the plurality of subcarriers or subbands, the first number of output coded bits is different than the second number of output coded bits; a puncturing block to puncture a coded bit stream for each of the plurality of subcarriers or subbands in accordance with the selected puncturing pattern; a mapping block to map a coded and punctured bit stream output from the puncturing block to one or more subcarrier symbols for each of the plurality of subcarriers or subbands, the first subcarrier or subband and the second subcarrier or subband are mapped to a set of the one or more subcarrier symbols."

Independent claim 10 has been amended to recite an apparatus comprising an adaptive bit loading block to select a modulation scheme and puncturing pattern “such that a first number of output coded bits in the puncturing pattern for the OFDM subcarrier or OFDM subcarrier subband is different than a second number of output coded bits in a second puncturing pattern for a second OFDM subcarrier or OFDM subcarrier subband, the OFDM subcarrier or OFDM subcarrier subband and the second OFDM subcarrier or OFDM subcarrier subband are mapped to a set of one or more subcarrier symbols.”

Independent claim 12 has been amended to recite an apparatus comprising an adaptive bit loading block to “select a modulation scheme and a puncturing pattern for each of a plurality of OFDM subcarriers or OFDM subcarrier subbands based on subcarrier channel state information, at least one of said subcarrier subbands comprising a plurality of OFDM subcarriers, the adaptive bit loading block to select a first puncturing pattern having a first number of output coded bits for a first OFDM subcarrier or OFDM subcarrier subband of the plurality of OFDM subcarriers or subbands, the adaptive bit loading block to select a second puncturing pattern having a second number of output coded bits for a second OFDM subcarrier or OFDM subcarrier subband of the plurality of OFDM subcarriers or subbands, the first number of output coded bits is different than the second number of output coded bits, the first OFDM subcarrier or OFDM subcarrier subband and the second OFDM subcarrier or OFDM subcarrier subband are mapped to a set of OFDM subcarrier symbols.”

Independent claim 15 has been amended to recite a method comprising “receiving channel state information for each of a plurality of subcarriers; selecting a modulation scheme and a puncturing pattern for each of a plurality of subcarriers or subcarrier subbands based on the subcarrier channel state information; selecting a first puncturing pattern having a first number of output coded bits for a first subcarrier or subband of the plurality of subcarriers or subbands; selecting a second puncturing pattern having a second number of output coded bits for a second subcarrier or subband of the plurality of subcarriers or subbands, the first number of output coded bits is different than the second number of output coded bits; and mapping the first subcarrier or subband and the second subcarrier or subband to subcarrier symbols.”

Independent claim 18 has been amended to recite a method comprising “receiving channel state information for each of a plurality of subcarriers; selecting a modulation scheme and a puncturing pattern for each of a plurality of subcarrier subbands based on the subcarrier channel state information, each subband comprising a plurality of OFDM subcarriers; selecting a first puncturing pattern having a first number of output coded bits for a first subband of the plurality of subbands; selecting a second puncturing pattern having a second number of output coded bits for a second subband of the plurality of subbands, the first number of output coded bits is different than the second number of output coded bits; and mapping the first subband and the second subband to a set of subcarrier symbols.”

Applicant submits that Bohnke fails to teach or suggest at least the above-identified language of amended independent claims 1, 10, 12, 15, and 18. While Bohnke both mentions and requires maintaining the same total number of coded bits per OFDM symbol, Bohnke does not teach or fairly suggest a first puncturing pattern having a first number of output coded bits for a first subcarrier or subband of the plurality of subcarriers or subbands, a second puncturing pattern having a second number of output coded bits for a second subcarrier or subband of the plurality of subcarriers or subbands, the first number of output coded bits is different than the second number of output coded bits, and the first subcarrier or subband and the second subcarrier or subband are mapped to a set of the one or more subcarrier symbols.

In view of the above, Applicant submits that Bohnke fails to teach or suggest all of the features recited by amended independent claims 1, 10, 12, 15, and 18. As such, Bohnke is insufficient to anticipate amended independent claims 1, 10, 12, 15, and 18 under § 102. Applicant submits that such claims are allowable for at least this reason. Applicant further submits that claims 2-9, 11, 13, 14, 16, and 17 are allowable by virtue of their dependency from allowable claims, as well as on their own merits.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 102(b) rejection of claims 1-18.

Conclusion

It is believed that claims 1-18 are in allowable form. Accordingly, a timely Notice of Allowance to this effect is earnestly solicited.

Applicant does not otherwise concede, however, the correctness of the Office Action's rejection with respect to any of the dependent claims discussed above. Accordingly, Applicant hereby reserves the right to make additional arguments as may be necessary to further distinguish the dependent claims from the cited references, taken alone or in combination, based on additional features contained in the dependent claims that were not discussed above. A detailed discussion of these differences is believed to be unnecessary at this time in view of the basic differences in the independent claims pointed out above.

The Examiner is invited to contact the undersigned to discuss any matter concerning this application.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. § 1.16 or § 1.17 to Deposit Account 50-4238.

Respectfully submitted,

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Under 37 CFR 1.34(a)

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